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REMARKS/ARGUMENTS

In an Office Action mailed September 20, 2005, the Examiner rejected claims 1-19 under 35 USC 103(a) as being as allegedly unpatentably obvious over WO 99/54141 (Bradshaw) in view of WO 95/34066 (Bruner). The Applicant respectfully traverses the rejections on the grounds that a prima facie case of obviousness has not been established. The cited references do not disclose, teach or suggest all of the limitations of the rejected claims, the Examiner has failed to establish a motivation to combine the teachings of Bradshaw with Bruner, and the Examiner has failed to provide any support for combining allegedly obvious limitations for which the Examiner has taken "Official Notice".

Applicant respectfully submits that claims 1-19 are not obvious over either of Bradshaw or Bruner, alone or in combination, because neither Bradshaw nor Bruner, alone or in combination, disclose, teach or suggest all of the limitations of the rejected claims. For example, neither Bradshaw nor Bruner, alone or in combination disclose, teach or suggest at least the following limitations:

" . . . scanning a reference pattern on a disc to create a table of coordinate data; and
            calibrating the gain of a fine actuator based on the table of coordinate data."
as recited in claim 1 and incorporated into dependent claims 2-9;

" . . . scanning a sawtooth pattern on a non-data side of an optical disc;
            generating a reflective signal based on the scanning; converting a duty cycle of the reflective signal into a radius value;
            incrementing a DAC (digital to analog converter) count to a new DAC count;
            repeating the scanning, the generating, and the converting; and
            calculating a fine actuator gain based on the DAC counts and the radius

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values."

as recited in claim 10 and incorporated into dependent claims 11-14; or

" . . . generating a table of coordinate data by scanning a reference pattern on an optical disc; and

calibrating the gain of a fine actuator based on the table of coordinate data. "

as recited in claim 15 and incorporated into dependent claims 16-19. Moreover, the Examiner has not supported the rejection with a prima facie case of obviousness.

In support of the rejections, the Examiner stated that "Bradshaw discloses . . . setting up a reference coordinate system on a disk." Bradshaw, however, does not disclose, teach or suggest, "scanning a reference pattern on a disc to create a table of coordinate data . . . ." as recited in claim 1.

Bradshaw discusses that a, "buffer 506 may arrange the polar data points such that the firing block 506 may access the polar data points for printing in sectors, similar to printing techniques employed for writing to a computer disk. In other words, the polar data points are ordered such that a first sector is accessed and printed, a second sector is then accessed and printed, etc. By way of another example, for printing one dot at a time, the buffer 506 may order the polar data points by angle of each particular radius such that each data point is printed in ascending order."

In Bradshaw, the "polar data points" which "the buffer 506 may arrange . . . such that the firing block 506 may access" them are from a "polar based bit map" which was converted from a "rectangular based bitmap 518" by a rectangular to polar block." Page 16, line 27- Page 17, line 1. Bradshaw does not disclose, teach or suggest, "scanning a reference pattern on a disc to create a table of coordinate data" as recited in claim 1, "scanning a sawtooth pattern on a non-data side of an optical disc" as recited in claim 10 or "generating a table of coordinate data by scanning a reference pattern on an optical disc" as recited in claim 15.

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In support of the rejections, the Examiner stated that "Bruner discloses on page 4 computing various disk calibration parameters including current equations used to generate null currents that maintain the transducer of the drive, i.e. gain." Applicants respectfully submit that the Bruner does not combine with Bradshaw, as discussed further below, to disclose, teach or suggest all of the limitations of the rejected claims.

Bruner relates to a "method of computing and storing a number of calibration prarmeters onto the disk of a hard disk drive." Page 4, lines 3-5. "The parameters include null current equations that are used to generate null currents which maintain the transducer of the drive above the centerline of a disk track, a jam current value which is used to accurately move the transducer from one track to another track, a head width calibration value which compensates for the different head widths of each transducer and a bandwidth calibration value which compensates for the different driving functions of the voice coil motor such as the strength of the motor magnet." Page 4, lines 12-20.

With respect to claims 2, 4, and 10-19, neither Bradshaw nor Bruner discloses, teaches or suggests at least the following limitations:

"... generating a reflective signal based on the reference pattern ...";
as recited in claim 2;

"... calculating a radius from a duty cycle of a reflective signal generated
from the reference pattern ..."
as recited in claim 4;

"... scanning a sawtooth pattern on a non-data side of an optical disc ...";
as recited in claim 10 and incorporated into dependent claims 11-14; or

"... scanning a reference pattern on an optical disc ...."
as recited in claim 15 and incorporated into dependent claims 16-19.

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Bruner relates to a "storing calibration parameters on the disk of a hard disk drive."
Page 1, lines 5-6. Bruner states that "[h]ard disk drives contain a magnetic disk which
rotates relative to a transducer head." Page 1, lines 10-11. Bruner does not disclose,
teach or suggest scanning on an "optical disc" as recited in claims 10 and 15 and does
not disclose, teach or suggest "generating a reflective signal based on the reference
pattern" or "calculating a radius from a duty cycle of a reflective signal generated from
the reference pattern," as recited in claims 2 or 4 respectively.

No Motivation to Combine:

The rejection of claims 1-19 under Section 103 is respectfully traversed on the grounds
that the Examiner has not set out a prima facie case of obviousness with evidence of a
motivation to combine Bradshaw with Bruner. MPEP 2143.01. "Obvousness can only
be established by combining or modifying the teachings of the prior art to produce the
claimed invention where there is some teaching, suggestion, or motivation to do so
found either explicitly or implicitly in the references themselves or in the knowledge
generally available to one of ordinary skill in the art." MPEP 2143.01. The sources for a
motivation to combine include, the nature of the problem to be solved, the teachings of
the prior art, and the knowledge of persons of ordinary skill in the art. MPEP 2143.01;
In re Rouffet, 149 F. 3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998). In
this case, the Examiner has failed to establish a motivation from any of these sources.

Bradshaw relates to "a printing system that is configured to radially print onto a media
that rotates in relation to a printing assembly." Page 1, lines 3-5. Bruner relates to a
"method of computing and storing a number of calibration pararmeters onto the disk of
a hard disk drive." Page 4, lines 12-20. The Examiner has failed to establish a
motivation to combine the printing system of Bradshaw with the hard disk drive of
Bruner to disclose, teach or suggest all of the limitations of the rejected claims.

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<u>No Support for "Official Notice" of Facts:</u>

The rejections of claims 1-19 under Section 103 are respectfully traversed on the grounds that a prima facie case of obviousness has not been established because the Examiner has failed to provide factual support for facts of which the Examiner has allegedly taken "Official Notice." For example, in support of the rejections, the Examiner stated without support, that, "Bradshaw and Bruner do not specifically disclose the duty cycle calibration or the digital to analog conversion as claimed. However, Official Notice is taken that both duty cycle calibration and digital to analog conversion are old and well known." OA page 2. The Examiner also took official notice, without factual support, of "digital to analog conversion"; a "linear reference pattern"; a "sawtooth reference pattern"; and a "line-fitting algorithm on coordinate data." OA, page 3.

The Examiner has provided no evidence to support a finding of these alleged, "well known" facts. The Examiner has also provided no evidence that the alleged "well known" facts would be combined with the cited references to disclose, teach or suggest all of the limitations of the rejected claims, as claimed.

The failure to support these alleged facts is error. See, e.g. In re Zurko, 59 USPQ 1693, 1697 (Fed. Cir. 2001); MPEP 2144.04 (A) (B) (C), establishing that it is not appropriate for the examiner to take official notice of facts without citing a prior art reference, where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known, and that a holding that general conclusions concerning what is "basic knowledge" or "common sense" to one of ordinary skill in the art without specific factual findings and some concrete evidence in the record to support these findings will not support an obviousness rejection. Applicants respectfully request that, in the event this ground of rejection is maintained, the Examiner cite a reference supporting the statement, or an affidavit if the assertion is based on the personal knowledge of the Examiner.

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Conclusion:

For the foregoing reasons, Applicant respectfully requests that the Examiner withdraw the rejections to claims 1-19 and allow claims 1-19.

Respectfully submitted,

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Peter Reitan
Registration No. 48,603

Law Offices of Larry K. Roberts, Inc.
P.O. Box 8569
Newport Beach, CA   92658-8569
Telephone (949) 640-6200
Facsimile (949) 640-1206